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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,996	03/31/2005	Olaf Langwald	ZAHFRI P731US	5391
20210 7590 02/28/2007 DAVIS & BUJOLD, P.L.L.C. 112 PLEASANT STREET CONCORD, NH 03301			EXAMINER LORENCE, RICHARD M	
			ART UNIT	PAPER NUMBER
			3681	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/529,996	Applicant(s) LANGWALD, OLAF	
	Examiner Richard M. Lorence	Art Unit 3681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>3/31/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is the first Office action on the merits of Application No. 10/529,996 filed on March 31, 2005.

The preliminary amendment filed on March 31, 2005 has been entered. The specification has been amended, claims 1-10 have been cancelled and new claims 11-19 have been added. Claims 11-19 are currently pending.

Priority

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). A copy of the certified copy of the priority document has been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

Information Disclosure Statement

The information disclosure statement (IDS) submitted on March 31, 2007 has been considered by the examiner.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the embodiment of claims 14 and 15 including plural springs must be shown or the feature canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: in line 7 in paragraph 8 "On the" should be changed to - - The - -; and in line 3 of paragraph 21 "30" should be changed to - - 40 - - . Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

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Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 19 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of "an accumulator" in lines 4-5 of claim 11 constitutes a double inclusion of this element which was previously recited in line 3.

Claim 15 recites the limitation "the multiple coil spring". There is insufficient antecedent basis for this limitation in the claim.

Claim 19 provides for the use of a hollow recirculating ball spindle, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it

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merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 19 as best understood is rejected under 35 U.S.C. 102(b) as being anticipated by Arena which discloses a hollow recirculating ball spindle 70 which accommodates a variety of parts including e.g. the rod 161 and displacement sensor 135.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 11-13 and 16 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,199,325 A (Reuter et al.) in view of US 6,457,783 B1 (Schanzenbach et al.).

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Reuter et al. discloses an actuating device 41 which as seen in Figures 3 and 4 includes an electric motor 70, a converter gearing 75, 81 and an accumulator in the form of a coil spring 86. The converter gearing of Reuter et al. is in the form of a linear screw arrangement having a hollow externally threaded screw spindle 81 and an internally threaded nut 75, but does not include a recirculating ball. Schanzenbach et al. provides evidence that the equivalence of a linear screw arrangement as shown in Reuter et al. and the recirculating ball was known at the time the invention was made (see e.g. column 3, lines 34-38 of Schanzenbach et al.).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the well-known recirculating ball type motion conversion device in place of the screw and nut arrangement shown in Reuter et al. since the recirculating ball type motion conversion device was known to be an equivalent means for converting rotary motion to translating motion, and further since the advantages associated with the ball screw (e.g. low friction, which decreases the amount of motor torque needed to move the output a given distance) would have been recognized by the ordinarily skilled artisan.

Claims 14 and 15 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,199,325 A (Reuter et al.) and US 6,457,783 B1 (Schanzenbach et al.) as applied to claims 11 and 13 above, and further in view of US 3,039,758 A (Gratzmuller).

In the actuating device of Reuter et al. as modified by Schanzenbach et al. the accumulator contains only a single spring 86. Gratzmuller suggests providing a rotary

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to linear motion converting device having an accumulator with a plurality of radially nested springs 8, 9, 10 as seen in Figure 2 as an alternative to an accumulator with a single spring 4 as shown in Figure 1. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form the accumulator of Reuter et al. as modified by Schanzenbach et al. with a plurality of radially nested springs in view of the teaching of Gratzmuller at column 2, lines 41-46 that such an arrangement leads to the desirable benefit of a reduced axial size.

Claim 17 as best understood is rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,199,325 A (Reuter et al.) and US 6,457,783 B1 (Schanzenbach et al.) as applied to claim 11 above, and further in view of US 6,595,338 B2 (Bansbach et al.).

The actuating device of Reuter et al. as modified by Schanzenbach et al. does not include a master cylinder and slave cylinder connected by a pipe. Instead the output of the actuating device acts directly on the movable clutch element. Bansbach et al. suggests that a clutch of the type shown in Reuter et al. may be controlled via a ball screw motion converting mechanism 90 forming a master cylinder connected via a pipe 88 with a slave cylinder 84. It would have been obvious to one having ordinary skill in the art at the time the invention was made to actuate the clutch of Reuter et al. using a master cylinder linked by a pipe with a slave cylinder in the manner suggested by Bansbach et al., since it would be recognized that such an arrangement permits the location of the electric motor and motion converter remote from the clutch.

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Claim 18 as best understood is rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,199,325 A (Reuter et al.) and US 6,457,783 B1 (Schanzenbach et al.) as applied to claim 11 above, and further in view of US 5,313,852 A (Arena).

The actuating device of Reuter et al. as modified by Schanzenbach et al. does not include a displacement sensor. Arena suggests providing a ball screw motion converting mechanism with a displacement sensor 135 situated within the screw. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the actuating device of Reuter et al. as modified by Schanzenbach et al. with a displacement sensor of the type shown in Arena in order to permit the position of the output of the actuator to be detected in view of the suggestion of Arena at lines 35-41 of column 5.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 5,267,635 A (Peterson et al.), US 6,269,926 B (Lemoine et al.) and US 6,848,557 B2 (Kapaan et al.) each show clutch actuators including a motion converting device including a screw and nut for converting rotary input of an electric motor to axial translation of an output member.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard M. Lorence whose telephone number is (571)

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272-7094. The examiner can normally be reached on Mondays through Fridays from 10:30AM to 7:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (571) 272-7095. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Richard M. Lorence
Primary Examiner
Art Unit 3681

rml